Notice of Allowability	Application No. 09/816,135	Applicant(s) SATO, KAZUHIKO
	Examiner Jerome Grant II	Art Unit 2626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to _____.

2. ☒ The allowed claim(s) is/are *1-31*.

3. ☒ The drawings filed on <u>26 March 2001</u> are accepted by the Examiner.

4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some*   c) ☒ None   of the:

      1. ☒ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
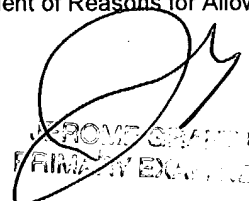
    * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

    (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____ .

    (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of

    Paper No./Mail Date _____ .

    Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)

3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
    Paper No./Mail Date <u>10-18-2004</u>

4. ☐ Examiner's Comment Regarding Requirement for Deposit
    of Biological Material

5. ☐ Notice of Informal Patent Application (PTO-152)

6. ☐ Interview Summary (PTO-413),
    Paper No./Mail Date _____ .

7. ☐ Examiner's Amendment/Comment

8. ☒ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____ .

Reasons for Allowance

Claims 1-4 are allowed for the reason the prior art does not teach or suggest in claimed combination, "... a specified portion detecting unit that detects specified portion in which gradation of the image data varies slowly from the predetermined region of said image data stored in the image data storing unit; a and an intermediate density data generating unit that generates intermediate density data composed with step smaller than the minimum value of a step between different gradation levels of said image data based on the result of detection by said specified portion detecting unit."

Claims 5-8, 21-29 are allowed for the reason the prior art does not teach or suggest in claimed combination, "... an image data operation processing unit that detects a portion containing sa d remarked pixel in which gradation of the image data varies slowly by calculating variation of gradation of image data in said surrounding region stored in the register, and generates intermediate density data composed with step smaller than the minimum value of a step between different gradation levels of image data."

Claims 9-11 are allowed for the reason the prior art does not teach or suggest in claimed combination, "... wherein if the difference between said maximum value and said minimum value is equal to or less than the predetermined value, said gradation enhancement process on/off deciding unit is turned on to output and reproduce an image having a greater number of gradation levels than that of input image data, while if the difference between aid maximum value and said minimum value is greater than the predetermined value, said gradation enhancement process on/off deciding unit is turned off to output and reproduce an image having adopted said average value as gradation level ..."

Claims 13-16 are allowed for the reason the prior art does not teach or suggest in claimed combination, "... coincidence detecting unit that detects whether or not a combination of a plurality of pixels in a terminate stored in the template storing unit coincides with the combination of said remarked pixel and pixels in region surrounding the pixel stored in the register... wherein if coincidence of said two combinations with each other is detected, an image having a greater number of gradation levels than that of said input image data is output and reproduced based on corresponding gradation in said template."

Claims 17-19 are allowed for the reason the prior art does not teach or suggest in claimed combination, "... a difference template storing unit that stores in advance the correspondence between difference data of arbitrary pixel in said

surrounding region and gradation having a greater number of gradation levels.

than that of input image data as difference template; and a difference coincidence

detecting unit that detects whether or not difference data in difference template

stored in said difference template storing unit coincides with the difference data

stored in said second register; wherein if it is detected that the two difference

data coincide with each other, an image having a greater number of gradation

levels than that of said input image data is output and reproduced based on the

corresponding gradation in said difference template."

Claim 30 is allowed for the reason the prior art does not teach or suggest in

claimed combination, "... detecting a specified portion in which gradation of the

image data varies slowly from the predetermined region of the stored image

data... generating intermediate density data composed with step smaller than

that minimum value of a step between different gradation levels of said image

data, based on the detection result of the specified portion..."

Any inquiry concerning this communication or earlier communications from the
examiner should be directed to Jerome Grant II whose telephone number is 703-305-
4391. The examiner can normally be reached on Mon.-Fri. from 9:00 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's
supervisor, Kimberly A Williams, can be reached on 703-305-4863. The fax phone

number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

J. Grant-II

JEROME GRANT II
PRIMARY EXAMINER